

CASE HISTORY



Product: CHEMSORB® + DUSTDOWN®
Problem: SOLVENTS AND DUST
Sector: Chemical

The customer:

The customer is a company that is active worldwide in the chemical sector. It develops, produces and markets speciality chemicals and intermediate chemical products.

The production processes are dedicated to creating numerous compounds, including anionic and cationic surfactants, polyurethanes, adhesives, sealants and specialty chemicals for the textile sector. The company is certified and sensitive to environmental issues, as well as those of its customers.

The problem:

For its typical production processes, the customer has plants that work continuously (24h), made up of complex connection points, mixing areas, vat washing and piece washing equipment and component loading units. With such a diverse and distributed range, it was evident that it would be necessary to collect and remove both mineral and polymer dust, and solvent vapours (VOC) containing traces of isocyanate.



Due its chemical-physical properties, this mixture of dust and solvents could be flammable and even explosive. For this reason, the treatment plants would have to be appropriately designed and built.

The proposed solution:

Following an adequate inspection, Tecnosida® srl proposed a preliminary design based on three points:

1. Local collection with a dedicated design for each machine and each release zone.
2. Conveying through specially designed piping
3. Treatment and removal in two stages:
 - a. A first dust filtration stage, **able to meet ATEX safety requirements**, using the Dustdown® filter to obtain a gas without any dust to be sent to the second stage
 - b. A second VOC vapour (solvent) removal stage with two vertical section Chemsorb® filters.



Plant data	
Year	2009
Capacity	6,000 Nm ³ /h
Amount of dust	Medium
Amount of VOC	Medium
Design features	Zone 22 Atex requirements
Constructional features	ATEX motors, use of anti-static sleeves, venting membranes and fire-proof shutters